

REMARKS

Reconsideration of the pending application is respectfully requested on the basis of the following particulars:

1. Amendments and Support for Same

Claims 1-8 have been amended to delete “configured to” and to further clarify the claimed features of the present invention with positive recitation of the claimed features without adding new matter. Approval and entry of the amendments are respectfully requested.

2. Objection to the claims

With respect to the objection to claims 5 and 6 as being duplicate of each other, Applicant respectfully submits that claim 5 recites, among other things, “a positive electrode and a negative electrode have positions that are the same in a length direction”, while claim 6 recites, among other things, “a positive electrode and a negative electrode have positions that differ in a length direction”. Therefore, claim 6 clearly differentiates from claim 5. Accordingly, Applicant respectfully requests the objection to claims 5 and 6 be reconsidered and withdrawn.

With respect to the Examiner’s contention that claims the recitation “configured to” in claim 1, for example, is functional language and not a positive limitation, Applicant respectfully remind the Examiner that generally there is nothing intrinsically wrong in defining something by what it does rather than what it is. MPEP §2173.05(g) and *In re Hallman* (CCPA 1981) 655 F2d 212, 210 USPQ 609. A functional limitation is often used in association with an element, ingredient, or step of a process to define a particular capability or purpose that is served by the recited element, ingredient or step. In *Innova/Pure Water Inc. v. Safari Water Filtration Sys. Inc.*, 381 F.3d 1111, 1117-20, 72 USPQ2d 1001, 1006-08 (Fed. Cir. 2004). Hence, by the use of structural limitations as well as functional descriptions,

Applicant's claims are in compliance with at least the guidelines set forth in MPEP §2173.05(g).

Notwithstanding the fact that functional language is commonly used to show how claimed elements cooperate with each other and, thus, helps defining and clarifying the claimed invention, Applicant has amended claims 1-8 to delete the recitation of "configured to" where possible without further diminishing the clarity of the claimed invention.

Approval and entry of the amendments are respectfully requested.

3. Rejections under 35 U.S.C. §103(a)

With respect to the rejection of claims 1, 2, 5, 6, 9/1, 9/2, 9/5, and 9/6 under 35 U.S.C. §103(a) as being unpatentable over Maeda (US 6,590,991) in view of Suyama (US 5,903,076), and to the rejection of claims 3, 4, 8, 9/3, 9/4, and 9/8 under 35 U.S.C. §103(a) as being unpatentable over Maeda and Suyama in further view of Hatanaka (US 6,229,249), Applicant respectfully traverses the rejection at least for the reason that Maeda, Suyama, and Hatanaka, combined or separately, fail describe each and every limitation recited in the rejected claims.

In page 4 of the Office Action, the Examiner contends that Maeda teaches the adhesive filled in the annular clearance is acrylic anaerobic adhesive, and that "there are a lot of acrylic adhesive on the market which permits disassembly". The Examiner further points out an example of a web site of "Loctite Anaerobic Adhesives" company as support for his contention of acrylic adhesive permitting disassembly.

In response, firstly, Applicant respectfully reminds the Examiner of MPEP §2141(II), which states that when applying 35 U.S.C. §103, the following tenets of patent law must be adhered to:

- (A) The claimed invention must be considered as a whole;
- (B) The references must be considered as a whole and must suggest the desirability and thus the obviousness of making the combination;
- (C) The references must be viewed without the benefit of impermissible hindsight vision afforded by the claimed invention; and

(D) Reasonable expectation of success is the standard with which obviousness is determined.

Secondly, Applicant respectfully submits again that Maeda does not support or suggest the idea of making the housing to be detachable from the bracket, and that the Examiner's contention actually is contrary to the original function and structure described in Maeda.

Applicant respectfully directs the Examiner's attention to Maeda, which states:

"An outer peripheral end face 12a of the flange 12i is fitted in an inner periphery 10c of the main body case 10 in pressing contact therewith and adhered thereto, whereby the bottom plate 12 is secured to the main body case 10.

*Consequently, the bottom plate 12, even if having a small thickness, can be secured to the main body case 10 **with the highest possible strength.***

An annular clearance 12d is formed between an outer periphery 12c of the cylindrical portion 12h of the bottom plate 12 and an inner periphery 10e of the main body case 10 and filled with an adhesive.

This specific construction enables the adhesive to secure the bottom plate 12 to the main body case with a still higher bond strength."

Maeda further states:

*"The adhesive to be used is an acrylic anaerobic adhesive which is curable with ultraviolet rays and heat. This adhesive is suitable from the viewpoint of amenability to assembly, **and heat resistance to withstand the heat of reflow soldering.**"* [emphasis added]

Hence, while the Examiner's statement "there are a lot of acrylic adhesive on the market which permits disassembly" may be true under other circumstances, such a general statement with no specific context relating to the claimed invention or the teaching of Maeda is improper and does not meet the requirements for establishing a *prima facie* case of obviousness, as detailed in MPEP § 2143 - 2143.03 (pages 2100-122 - 2100-136), which are: first, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference to combine the teachings; second, there must be a reasonable expectation of success; and,

finally, the prior art reference (or references when combined) must teach or suggest all of the claim limitations.

Further, Applicant respectfully submits that a proper application of Maeda in the rejection requires that the Examiner does not misinterpret Maeda in such a manner that is contrary to the functional and structural principles taught in Maeda. That is, in view of the consistent teaching in Maeda of a strong assembly for a sound-vibration generating device, wherein anaerobic adhesive is used that is “heat resistant to withstand the heat of reflow soldering” and that provides the “highest possible strength”, the Examiner’s contention of reheating or dissolving adhesive from annular clearance 12d to allow the housing to be detached from the bracket is completely contrary to Maeda’s purpose for using the adhesive.

Still further, Applicant respectfully reiterates that, as Maeda clearly shows that the clearance 12d is meant for fixing the bracket to the housing in a non-detachable manner and that the housing is not detachable from the bracket before being mounted on the circuit board, any interpretation contrary to the teaching of Maeda is improper.

Moreover, while Applicant is appreciative of the Examiner’s admission that Maeda fails to explicitly teach the housing of the multifunctional vibrating actuator being detachable from the bracket so as to allow the bracket to be fixed on the surface of the circuit board without the multifunctional vibrating actuator, Applicant respectfully submits that the Examiner continuing assertion of acrylic anaerobic adhesive as being able of disassembly is contrary to the Examiner’s admission of Maeda being deficient in the housing of the multifunctional vibrating actuator being detachable from the bracket. That is, by the Examiner’s admission of the deficiency of Maeda, it is clear that the assertion of “there are a lot of acrylic adhesive on the market which permits disassembly” is irrelevant to the claimed invention and to the teaching of Maeda.

As discussed previously, due to high temperature of solder reflow process, the multifunctional vibrating actuator of the presently claimed invention is detachable from the bracket so as to allow the bracket to be fixed to the circuit board prior to mounting the multifunctional vibrating actuator to the circuit board via the bracket. By such a configuration, the multifunctional vibrating actuator avoids being subjected to stress, misalignment, damages, etc. that may be caused if the multifunctional vibrating actuator was fixed to the circuit board and subjected to high temperature solder reflow process.

Applicant respectfully asserts again that Maeda is directed to a strong assembly for a sound-vibration generating device with the use of anaerobic adhesive to provide the strongest possible bond that is resistant to heat. Contrary to Applicant's invention, Maeda relies on strong adhesive that resists damage from high temperature reflow. Hence, Maeda fails to teach, disclose, or suggest such an issue and how to overcome the problems of subjecting the device to high temperature reflow with a mounting structure.

With respect to Suyama, the Examiner contends that Suyama teaches in Figs. 28 and 31 the "housing" 100 of the vibrating actuator being detachable from the "bracket" 90. However, taking Suyama in full and proper context, the references generally describes an annular resinous molded member (90), with hook-shaped projections (89), fixed to a collision cover (48). Attached to the annular resinous molded member (90) is, among other things, a yoke member (100) with hooks (98). Supporting rubber members 96 strap hooks (98) to hook-shaped projections (89). Applicant respectfully submits that the "bracket" (i.e., annular resinous molded member 90) of Suyama is attached to a collision cover (38) and not to a circuit board.

Applicant respectfully notes that col. 13, lines 16-22 of Suyama discloses that the magnetic circuit is flexibly supported using the rubber member so that the magnetic circuit, including the yoke (100) may move up and down relatively easily. However, there is no suggestion, teaching, or disclosure of the "bracket" (90) be mounted to a circuit board, or a circuit board subjected to high temperature reflow process. That is, the collision cover (38) of Suyama is not equivalent to a circuit board, and there is no disclosure, teaching, or suggestion in Suyama of the bracket to be fixed to a circuit board prior to mounting the multifunctional vibrating actuator to the circuit board via the bracket.

Further, there is no teaching, or suggestion in Suyama of avoiding subjecting a multifunctional vibrating actuator to stress, misalignment, damages, etc. that may be caused if the multifunctional vibrating actuator was fixed to the circuit board and subjected to high temperature solder reflow process.

With respect to Hatanaka, the reference generally relates to surface-mount type crystal oscillator. Similar to Suyama and Maeda, Hatanaka fails to teach, disclose, or suggest the multifunctional vibrating actuator being detachable from the bracket to allow the bracket to

be fixed to the circuit board prior to mounting the multifunctional vibrating actuator to the circuit board via the bracket.

The requirements for establishing a *prima facie* case of obviousness, as detailed in MPEP § 2143 - 2143.03 (pages 2100-122 - 2100-136), are: first, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference to combine the teachings; second, there must be a reasonable expectation of success; and, finally, the prior art reference (or references when combined) must teach or suggest all of the claim limitations.

Further, according to MPEP §2141(I), Patent examiners carry the responsibility of making sure that the standard of patentability enunciated by the Supreme Court and by the Congress is applied in each and every case. The Supreme Court in *Graham v. John Deere*, 383 U.S. 1, 148 USPQ 459 (1966), stated:

Under § 103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved. Against this background, the obviousness or nonobviousness of the subject matter is determined. Such secondary considerations as commercial success, long felt but unsolved needs, failure of others, etc., might be utilized to give light to the circumstances surrounding the origin of the subject matter sought to be patented.

As Maeda and Suyama, combined or separately, fail to teach, disclose, or suggest a multifunctional vibrating actuator detachable from a bracket and mountable on a circuit board using the bracket after the bracket is fixed to the circuit board, the §103(a) rejections are improper.

In view of the amendment and arguments set forth above, Applicant respectfully requests reconsideration and withdrawal of the §103(a) rejections.

4. Conclusion

In view of the amendments to the claims, and in further view of the foregoing remarks, it is respectfully submitted that the application is in condition for allowance. Accordingly, it is requested that claims 1-9 be allowed and the application be passed to issue.

If any issues remain that may be resolved by a telephone or facsimile communication with the Applicant's representative, the Examiner is invited to contact the undersigned at the numbers shown.

The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 50-4525.

Respectfully submitted,

/Donald R. Studebaker/
Donald R. Studebaker
Registration No. 32,815

Studebaker & Brackett PC
1890 Preston White Drive
Suite 105
Reston, Virginia 20191
(703) 390-9051
Fax: (703) 390-1277
don.studebaker@sbpatentlaw.com